

(19) JAPANESE PATENT OFFICE (JP)  
(12) Official Gazette for Unexamined  
Patent Applications (A)

(11) Japanese Unexamined Patent  
Application No.  
**Sho 59-122415**

(51) Int. Cl.<sup>3</sup> ID Code(s):  
A 61 K 7/02

Intra-bureau No(s):  
7306-4C

(43) Disclosure Date: July 14, 1984

Number of Claims: 1  
Request for Examination: Not submitted

(Total 5 pages)

(54) Title: Cosmetic Makeup

(72) Inventor: Masatoshi Nishio  
2-14-11 Sakurajosui, Setagaya-ku, Tokyo

(21) Application No.: Sho 57-227464

(71) Applicant: Kobayashi Kose Co., Ltd.  
3-6-2 Nihonbashi, Chuo-ku, Tokyo

(22) Filing Date: December 28, 1982

(72) Inventor: Masahiro Sumise  
Park Heights C-223  
3-20-9 Chuo-ku  
Warabi-shi

### Specification

1. Title of the Invention  
COSMETIC MAKEUP

2. Claims

1. Cosmetic makeup characterized by the fact that it contains an oily component, a volatile oily solution, a thickening agent, hydrophobic anhydrous silica, and water as essential ingredients.

2. Cosmetic makeup in Claim 1, characterized by the fact that the thickening agent is one or a combination of two or more of sucrose fatty acid ester, dextrin fatty acid ester, polyhydric alcohol ester (with 8-26 carbon atoms), polyisobutylene, and esters of rosin acids.

3. Detailed Description of the Invention

The present invention relates to a novel cosmetic makeup. Its object is to provide cosmetic makeup which adheres well to skin and is highly safe.

Owing to the fact that they are oily, the prior art oily cosmetic makeups such as lipstick, eye shadow, eye liner, and

oily foundations had drawbacks such as being greasy and sticky, transferring to various objects because the applied makeup came off easily, and easily smudging.

In order to overcome these drawbacks, the present inventors attempted to manufacture an oily cosmetic makeup by adding a volatile oily solution to the cosmetic composition so a strong film could be formed when the volatile oily solution volatilized from the applied cosmetic without sacrificing the texture of the prior art cosmetic. This prototype performed well enough in terms of adhesion to the skin, but it had the disadvantage of poor safety because it contained a volatile oily solution. Then, as a result of extensive studies carried out in view of the above-described situation, the present inventors discovered that makeup composition that adheres well to the skin and is highly safe can be obtained by using a composition consisting of a combination of an oily component, a volatile oily solution, a thickening agent, hydrophobic anhydrous silica, and water, thereby completing the invention.

The constitution of the invention is described hereinbelow.

The oily component used in the present invention may be any such substance that is conventionally used in the field of cosmetics and is safe to man. Examples include vegetable oils such as olive oil and castor oil; waxes such as beeswax, lanolin, candelilla wax, and Japanese wax; hydrocarbons such as liquid paraffin, squalane, petrolatum, and paraffin wax; higher alcohols such as cetanol and stearyl alcohol; and higher fatty acids such as stearic acid and behenic acid; as well as ester oils and silicone oils. The oily component can be used in amounts of no more than 30 percent by weight. If more than 30 percent by weight is used, the cosmetic will not adhere well to the skin.

Examples of the volatile oily solution include volatile branched hydrocarbons, volatile linear dimethylsilicone oil, and volatile cyclic silicone oil. An example of a volatile branched hydrocarbon is IP Solvent (made by Idemitsu Petrochemical Kabushiki Kaisha), a synthetic petroleum-based hydrocarbon. The main ingredient of IP Solvent is isoparaffin and is present in amounts of at least 95%. The preferred volatile linear dimethylsilicone oil and volatile cyclic silicone oil have a viscosity of no more than 8 centistokes at 25°C. The volatile oily solution can be used in amounts of from 5 to 50 percent by weight, with 10 to 30 percent by weight being preferred. If less than 5 percent by weight is used, good adhesion to the skin, a premier effect of the invention, is not obtained. If more than 50 percent by weight is used, the compositional balance of the cosmetic is ruined and it shows poor stability.

Examples of the thickening agent include sucrose fatty acid ester, dextrin fatty acid ester, polyhydric alcohol ester (having 8-26 carbon atoms), polyisobutylene, and esters of rosin acids. These agents may be used singly or in combinations of two or more. The thickening agent may be blended in amounts of 1-35 percent by weight, with 5-25 percent by weight being especially preferred. Thus, if less than 1 percent by weight is used, a stable cosmetic makeup cannot be obtained. If more than 35 percent by weight is used, the effects of thickening agent are excessive, and softness, moistness, and a desirable texture are lost.

What is meant by hydrophobic anhydrous silica are, for example, Aerogel R-972 (made by Nihon Aerogel Kabushiki Kaisha) and Taranox 500 (made by Tarco Incorporation [sic]). Aerogel R-972 consists of a silicon dioxide base in which a portion of the hydrophilic hydroxyl groups usually covering the surface of silica are substituted with dimethyldichlorosilane groups. Taranox 500 consists of a silicon dioxide base in which the hydrophilic hydroxyl groups usually covering the surface of conventional silica are substituted with hydrophobic trimethylsiloxyl groups. Hydrophobic anhydrous silica can be blended in amounts ranging from 0.5 to 5 percent by weight, with 1 to 4 percent by weight being preferred. If less than 0.5 percent by weight is used, water cannot be stably dispersed in the oil, and the effect of the invention cannot be obtained. If more than 5 percent by weight is used, the system solidifies into a gel, forms a solidified gel and loses its softness, moistness, and desirable texture.

Water can be blended in amounts ranging from 5 to 50 percent by weight, with 10 to 40 percent by weight being preferred. If less than 5 percent by weight is used, the effect of the invention cannot be obtained. If more than 50 percent by weight is used, the applied film will be weak, adhere poorly to the skin, and show poor stability. It will be appreciated that the ability to blend water stably [into this cosmetic] brings many advantages. One is that water-soluble humectants can be blended into the cosmetic freely. This makes it possible to freely blend water-soluble agents that could not be used in the prior art into the cosmetic, allowing the pH of the aqueous phase to be controlled and matched to the weakly acidic pH of the skin. It is also possible to use water-soluble dyes and expand the selection of novel coloring materials.

In addition to the ingredients mentioned hereinabove, suitable additives such as pigments, dyes, pigment-dispersing agents, antioxidants, perfumes, preservatives, pearlescent agents, resins, plasticizers, humectants, acids, and bases may be added to the makeup composition of the invention.

In addition to having the above composition, a feature of the cosmetic makeup of the invention is that hydrophobic anhydrous silica containing water dispersed as fine droplets is dispersed in the oily component which contains the volatile oily solution and thickening agent.

The present invention is described further by means of working examples hereinbelow. The examples in no way limit the present invention. Percent indicates percent by weight.

[Working Example 1] Lipstick

(Formulation)	%
(1) Pentaerythritol of esters rosin acids	7.0
(2) Carnauba wax	2.0
(3) Microcrystalline wax	2.0
(4) Aluminum isostearate	2.0
(5) Propylene glycol dicaprate	10.0
(6) IP Solvent	15.7
(7) Dextrin fatty acid ester	2.5
(8) Sucrose fatty acid ester	2.5
(9) Soybean phospholipids	0.5
(10) Red No. 202	2.0
(11) Titanium oxide	0.5
(12) Mica	8.0
(13) Mica titanium	9.5
(14) Perfume	0.2
(15) Preservative	0.1
(16) Aerogel R-972	2.5
(17) 1,3-Butylene glycol	8.0
(18) Purified water	25.0

(Preparation)

- A (1)-(9) were heated and melted, (10)-(15) were added, and dispersion was carried out on a three-roll mill.
- B (16)-(18) were stirred until even at high speed.
- C At 85°C B was added to A and mixed, until even, and the mixture was degassed, poured into containers, and cooled to obtain lipstick.

The lipstick of the invention obtained in the above-described manner has an excellent texture, adheres well to the skin, and is highly safe. It also shows good stability over prolonged periods of time.

A wear test was conducted to compare the superb texture and adhesion to the skin of the inventive product to Comparative Example 1. A patch test was used for comparing safety.

The lipstick of Comparative Example 1 is a prior art lipstick manufactured according to the following formulation and method.

[Comparative Example 1] Lipstick

(Formulation)	%
(1) Pentaerythritol esters of rosin acids	20.0
(2) Microcrystalline wax	10.0
(3) Sucrose fatty acid ester	10.0
(4) Isocetyl stearate	10.0
(5) Glycerol fatty acid ester	10.0
(6) Octyl dodecyl myristate	13.0
(7) Red No. 202	2.0
(8) Titanium oxide	0.5
(9) Mica	15.0
(10) Mica titanium	9.2
(11) Perfume	0.2
(12) Preservative	0.1

(Preparation)

- A (1)-(6) were heated and melted, (7)-(12) were added, and dispersion was carried out on a three-roll mill.
- B At 85°C, the mixture was degassed, poured into containers, and cooled to obtain lipstick.

The wear test will be described hereinbelow. A wear test comparing the inventive lipstick of Working Example 1 and the prior art lipstick of Comparative Example 1 was carried out in order to ascertain the texture and the extent of adhesion to the skin. In the wear test, a 12-member panel ranked four items (fresh, moist look; nonstickiness; coffee cup transfer; and tissue uptake) on a five-grade scale. A high grade indicates good performance. The results are shown in Table 1.

A patch test was conducted in which the inside of the forearm of 34 healthy men and women was exposed to the inventive product, using a porous adhesive plaster. The results are shown in Table 2.

Table 1

Wear Test	Score	
	Lipstick of Comparative Example 1	Lipstick of Working Example 1
(1) Fresh, moist look	1.6	3.8
(2) Nonstickiness	2.9	3.7
(3) Transfer to coffee cup	2.0	4.5
(4) Tissue uptake	2.2	4.2
Note 1 The scores are the average from a 12-member panel.		
Note 2 The method for testing transfer to coffee cup consisted of applying the lipstick, then 5 min. later holding a white coffee cup to the lips for 5 sec., and visually determining the amount of lipstick transferred.		
Note 3 The method for testing tissue uptake consisted of applying the lipstick, then 5 min later lightly wiping the lips with a tissue, and visually determining the amount of lipstick transferred to the tissue.		

Table 2

Sample	Lipstick of Working Example 1
No of positive	0
No. of negatives	34
Irritancy	Not irritating

As can be clearly seen from Tables 1 and 2, the wear test confirmed the superb texture and adhesion to the skin of the inventive lipstick of Working Example 1, and the patch test confirmed that it is highly safe.

#### [Working Example 2] Eye Shadow

(Formulation)	%
(1) Pentaerythritol esters of rosin acids	7.0
(2) Aluminum isostearate	2.0
(3) Propylene glycol dicaprate	8.0
(4) Soybean phospholipid	1.0
(5) IP Solvent	12.3
(6) Cyclic silicone oil (2.5 CS)	10.0
(7) Dextrin fatty acid ester	2.5
(8) Sucrose fatty acid ester	2.0
(9) Iron oxide mica titanium	8.0
(10) Mica titanium	15.0
(11) Iron oxide black	2.0
(12) Perfume	0.1
(13) Preservative	0.1
(14) Taradox 500	2.5
(15) 1,3-Butylene glycol	5.5
(16) Purified water	22.0

#### (Preparation)

- A (1)-(8) were heated and melted, (9)-(13) were added, and dispersion was carried out on a three-roll mill.
- B (14)-(16) were mixed until even at high speed.
- C At 85°C, B was added to A and mixed until even, the mixture was degassed, poured into containers, and cooled to obtain eye shadow.

The inventive eye shadow obtained in the above-described manner had superior texture, adhered well to the skin, and was highly safe. It also showed good stability over prolonged periods of time.

#### [Working Example 3] Lipstick

(Formulation)	%
(1) Pentaerythritol esters of rosin acids	10.0
(2) Isoparaffin	2.0
(3) Aluminum isostearate	1.0
(4) Isocetyl stearate	10.0
(5) Soybean phospholipids	1.0
(6) IP Solvent	11.0
(7) Sucrose fatty acid ester	2.5
(8) Dextrin fatty acid ester	2.5
(9) Red No. 202	2.0
(10) Titanium oxide	0.5
(11) Mica	8.0
(12) Mica titanium	14.2
(13) Perfume	0.2
(14) Preservative	0.1
(15) Aerogel R-972	2.5
(16) Propylene glycol	6.0
(17) Purified water	26.5

#### (Preparation)

- A (1)-(8) were heated and melted, (9)-(14) were added, and dispersion was carried out on a three-roll mill.
- B (15)-(17) were mixed until even at high speed.
- C At 85°C, B was added to A and mixed until even, and the mixture was degassed, poured into containers, and cooled to obtain lipstick. The inventive lipstick obtained in the above-

described manner had superb texture, adhered well to the skin, and was highly safe. It also showed good stability over prolonged periods of time.

Applicant: Kabushiki Kaisha Kobayashi Kose